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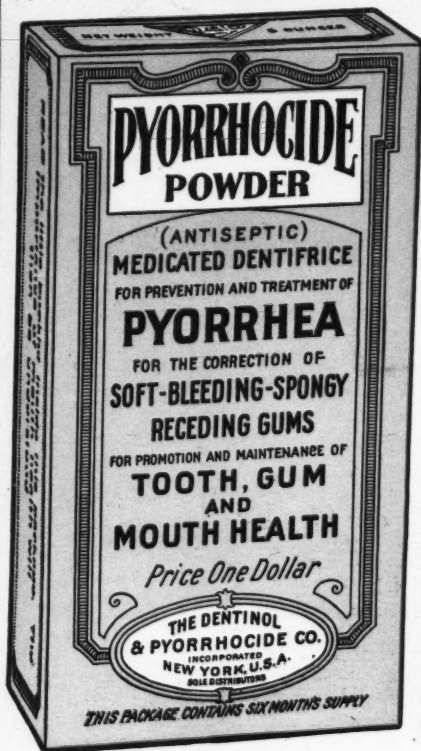
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ORAL HYGIENE

NOVEMBER ~ *A Journal for Dentists* ~ 1924

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Toledo, Ohio, U. S. A.

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PYORRHOCIDE POWDER (Antiseptic)

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ORAL HYGIENE

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NOVEMBER, 1924

VOL. XIV, No. 11

National Defense

By M. W. IRELAND, the Surgeon-General, U. S. Army



ON Defense Day the medical profession gave splendid evidence of their support of the National Defense policy.

Officers of the Medical, Dental, and Veterinary sections of the Officers' Reserve Corps, and members of the professions not so enrolled responded to the call in a most gratifying manner, and contributed materially to the success of the nation's test of its citizens' availability for the protection of the country in emergency.

I desire to express my sincere appreciation of the continued evidence of support which the medical, dental, and veterinary professions are giving to the War Department in the effort to develop adequate medical, dental, and veterinary services for the Army.

The obligation for the organization in peace of the units of the Medical Department is appropriately placed upon the Medical, Dental, and Veterinary professions of the country. Supervision of this organization as the military representative of these professions is one of the outstanding obligations of my office.

Numerically, the Medical De-

partment sections of the Officers' Reserve Corps are inadequate for the War Department plan. Very definite progress has been made in the development of units of the Medical Department but the organization is far from the perfect machine which the achievements of the medical, dental and veterinary professions should warrant.

Efficient organization cannot be effected without a Medical Department Reserve of 20,000 Medical, 5,000 Dental, and 2,000 Veterinary officers. Only 50 per cent of this enrollment has been attained.

I cannot too strongly urge the necessity for completion of the medical program at an early date, and it is my sincere hope that the Dental Societies will present to their membership, and the officers of the Reserve Corps to their colleagues, the importance of enrollment in the Reserve.

Further, our organization plans are imperfect, and I desire that officers of the Reserve Corps give the War Department the advantage of constructive criticism which will aid the harmonious and efficient development of Medical units which will serve the army efficiently and to the credit of the professions.

On Prophylaxis

By REX D. TAYLOR D. S.



THE term prophylaxis according to Stedman's Medical Dictionary means "The prevention of disease". In this short dissertation I shall attempt to stress some of the well-known but frequently neglected phases of restorations that tend to bring about a morbid process.

Let us first consider the individual tooth that is partially destroyed. What are the cardinal points to be considered in such a case? In the order of their importance they would follow in this manner:

1. Protection of pulp vitality;
2. Extension for prevention;
3. Polish and finish;
4. Contact point and contour;
5. Occlusion and articulation;
6. Choice of materials.

How often have you had to remove beautiful inlays, fine alloys, or well-matched silicates because someone neglected to take simple precautions in a rather deep cavity? Think of the difference in results, satisfaction to the patient and risk of graver consequences that have been caused by not taking a few minutes to line that cavity with cement, zinc oxide and oil of cloves or even some cavity varnish. To my mind this is the greatest ounce of prevention at

our command in cavities that are at all deep.

What is the greatest cause of decay around fillings? Can you find any modern dentist who will not agree with you if you start to laud Dr. Black's extension for prevention theory?

If there are any left they are rare when it comes to discussion; but why do we still see a portion of a molar fissure filled, a margin at a contact point, to say nothing of decay under fillings that could be removed without even causing a sensation to the patient? A section of our local society passed an admirable resolution to the effect that it is dangerous to treat a root canal without a rubber dam and therefore in their opinion constitutes malpractice. Who can say that Dr. Black's theory is not more universally accepted than the rubber dam—then why should we find case after case where it is ignored?

The failure properly to polish and finish fillings is a common and inexcusable failing. How often we see beautiful inlays that have a high polish in the same mouth with alloys that are ragged and rough—usually done by the same man? Call him careless and he is offended, but the truth hurts sometimes.

Pick up a half-dozen full series of x-rays and look for overhanging fillings—you will

*Read before the New York Stomatological Society.

Kind Restorations*

AYLO D. S., New York, N. Y.

see many more than you expect, even many of those beautiful inlays of which the maker is so proud. Can you have normal, healthy tissue with this constant source of irritation?

It only takes a few minutes to change this restoration from a mess to one of which you are justly proud. Your stock with the patient will usually go up, for most of them realize that this care is rather unique and will think about it and realize the difference and that you are thorough. This is true of all types of restorations but particularly in the case of alloys. These messes may irritate the tongue, cheek and gingival tissues.

Little need be said of the contact point other than that it is a point and not a surface, for a *point* separates food whereas it will pack between *surfaces*. This point is labial-occlusal between cuspid and first bicuspid and with each succeeding point distally it becomes slightly more lingual and not quite so near the occlusal surface. Its location should be studied and when in doubt it is safer if too far buccally and occlusally.

Poor contact points cause food to pack between teeth thereby exerting undue pressure on teeth and tissue causing local gingival irritation and often tooth movement which may lead to malocclusion; this food retention is

also a great cause of approximal cavities.

Contour is important in making approximal spaces self-cleansing. A description of correct contour is of little value and, to master it, one must study and note teeth as he works, and after extracting them.

Occlusion and articulation rank with the last two points in importance. We all recognize superior traumatic occlusion as harmful and usually correct it, but many do not seem to care if their work is in infra occlusion.

The loss of function and harmony of the inclined planes is one of serious consequences and far-reaching effects and should not be ignored. A discussion of this would lead away from our subject and so I will simply say that in order for a tooth to remain healthy it is imperative that it have normal function. A good plan is to leave the restoration slightly high until inserted in the mouth and then with the aid of articulating paper make the final adjustments; in this manner the tooth is restored to normal function with a greater degree of certainty.

The choice of materials has long been the source of great discussion; each has its advantages and disadvantages and as yet there isn't any cure-all. On the other hand there is no justification for the complete elimination

of any of our recognized materials.

The old plug gold filling is still the basis of comparison and is the material of choice for accessible cavities where the amount of restoration is not too great, for then the strain on the tooth and the patient must be considered, the esthetic results must also be taken into consideration.

In extensive or compound cavities the gold inlay is the first choice in most cases and the amalgam in others.

In all cases a good amalgam is far superior to a poor inlay. Without question, a good amalgam can be inserted in a shorter time and at less expense to the patient than an equally good inlay and where this consideration is important a better service is rendered to the patient by being honest with them as well as with yourself.

It does take as much time properly to prepare the cavity but the amalgam may be inserted in about the same time as it takes to get a good impression and bite for the inlay, therefore all laboratory time is eliminated and if you will carefully consider this it is a considerable saving and it is here only that time and costs are reduced, for the polishing and finishing of both require about the same time. Our trouble has been that we have been sloppy with alloys, this abuse causing lack of appreciation and improper compensation.

For cervical cavities in molars and many other cases they have a decided advantage over inlays.

Jacket crowns are ideal when indicated and properly carried out, but frequently are lacking in contact point and articulation and occlusion; be sure that there is no overhang at the shoulder and that there is a good marginal fit. This class of work is usually highly appreciated and well compensated for, and therefore there is no excuse for the neglect.

Silicates to my mind are still a necessary evil that should be used with great care and discrimination. Never use them posterior to a cuspid unless in a window cut into an inlay. Always use a cavity varnish or lining. Do not give the patient a false sense of security by not explaining that they must be replaced from time to time. Porcelain inlays can often be used in their place to advantage.

The gold crown belongs to the relics of yesterday and has no place in modern dentistry. With the inlay, Carmichael, jacket crown and even the amalgam filling to take its place, its use is limited to the very rare case of replacing a former crown where the tooth has been ground to such an extent that the use of any of the other methods of restoration is impossible.

The devitalized tooth problem while related to restorations covers too broad a field to be considered here.

Let us now consider the restoration of missing teeth. In this connection all statements are of necessity general because each case is a separate problem as all factors are never the same.

Where a single tooth is missing the question immediately arises as to the advisability of its restoration. It is a case for careful consideration and I believe the easiest way to settle it is to take a good full bite and articulate it, now sit down and study.

What of the occlusion—is there some tooth that is without an antagonist one and likely to elongate, or is there a chance of a severe tilting or are the surfaces so occluding that the planes will maintain present relationship with little likelihood of future trouble?

If any but the last consideration is true then comes the question of the teeth on either side of the space; are they strong enough to stand the extra strain, what is the general mouth condition, *will*, and not *can*, the patient take proper care of a bridge?

If these can be answered in the affirmative then we are justified in considering some form of restoration. The choice is of a small fixed bridge using some form of inlay or onlay, a Nesbit bridge, or a removable bridge.

In most cases the first is the choice as less tooth destruction is necessary than for a removable bridge, and it is usually safer than the Nesbit because of danger of erosion from clasps and, to my mind, less strain on abutments because of fixation and not pulling it in and out, there is another consideration and that is that it does not need the future attention for adjustment that both of the others do and

with some cases this is important.

In most cases two inlays are necessary—the pontice or dummy fixed to the stronger of the two and a rest on the second.

The problem of keeping it clean should also be considered; for uppers the Tinker type is probably the easiest cleaned; for lower posterior the self-cleansing or V-type is the one of choice. Most anterior bridges are easier to cleanse and the problem lessens.

When there are several or many teeth missing a small partial denture is usually better than extensive bridge work. The work of the dentist should not consist of merely taking impression, bite and shade; he should also note condition of remaining teeth and decide then which is best suited for clasps, general condition of tissues and any other deviation from normal. Under no circumstances should the first denture be of gold because no matter how long the teeth have been out or how thoroughly the tissues have shrunk there is a change when they are called upon to perform a new function and therefore the denture is of a temporary nature and the patient should understand this and also the necessity of a new one later. This is important because of the tissues and the remaining teeth; partial dentures should function and not be mere ornaments otherwise undue strain is thrown on the abutments and abnormal absorption of the process is caused.

The problem of clasps is important. They should maintain the denture in one position but not strain the teeth that they are attached to or irritate the surrounding tissue by being too far gingivally.

The cast clasp was never intended for denture work and rarely if ever is indicated. There are three varieties of wrought clasps, the round, half-round, and the flat; each has its place and good judgment is needed in selecting for each case.

The round, when possible to use, is by far the safest as there is less surface contact and less strain inserting and removing; however it does not prevent tilting as well as the flat or half-round.

On cuspids the half-round is usually the most satisfactory. In selecting type of clasp to be used the total number on the case and the relationship of one to another must be considered. A clasp should not have that decided snap that many like to hear as it usually is a decided strain on the tooth and has a tendency to work towards the gingival; it should be kept away from the gingival to avoid tissue irritation and cervical cavities; it should always rest on enamel or filling

and should be at or very near the point of greatest tooth diameter.

The teeth restored by denture or bridge should articulate as well as any inlay, jacket or other restoration in order to avoid elongation, tilting, or incorrect force that will cause pericementitis or some other morbid process.

A patient should be seen every second day or so, to correct cervical fit, impingement on soft tissue, traumatic occlusion, adjustment of clasps and to make other minor corrections until one is assured that all is well. Watch mouth for all slight irritations for they are so easily relieved in the beginning and the end results, if neglected, are so distressing.

Time spent in instructing patients as to the care of their mouths and restorations is of great benefit and usually appreciated, besides making your work more lasting and of greater benefit.

In closing let me say that it is the small details that seem unimportant but which actually change the whole character of your work from a menace to a fine professional service and that these details are easily and quickly accomplished.



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A Letter from California

My dear Dr. McGee:

MY ATTENTION has been called so frequently to your editorial in *ORAL HYGIENE*, February, 1924, pages 227-230, criticizing rather harshly the attitude of the University of California toward dental education that I feel constrained even at this late date to point out to you the errors in that editorial.

In the second paragraph, on page 227, you state that "beginning with the fall of the present year (1924) the University of California will require six (s-i-x) years for graduation in the dental school." You probably received this information through the press (generally unreliable) and in your excited state of mind failed to verify it, which accounts for the subsequent vitriolic and vituperative as well as personal criticism.

The University of California will not require six years for graduation beginning with the fall of 1924. In 1923 it offered the opportunity, which has heretofore been offered in other state universities, to acquire two degrees in six years by satisfactorily completing two years of collegiate work in the College of Letters and Science and four years of work in the College of Dentistry. At the end of the fifth year, if the candidate has

successfully met the requirements, he will be recommended for the B. S. degree, and, under like conditions, at the end of the sixth year he will be recommended for the D. D. S. degree. This plan will be continued until a better one is adopted.

Please bear in mind that this is not "an explanation" of an "over-zealous advocate of long-time dental courses" asked for in your editorial, because this university has not adopted the five-year course, and, furthermore, the faculty of the college and the Academic Senate, numbering some eight hundred members, adopted a resolution favoring no departure from the four-year plan until after the Carnegie Foundation Survey on Dental Education has been completed and the report published.

You infer that this faculty proposes to take away dental service from the public so generally needed. If you care to investigate, I believe you will find that this faculty has done more than most faculties in this country in broadcasting a knowledge of modern dental service, especially in the field of prevention.

For fifteen years we have been working assiduously on this problem, both in a public and private way, and if the reports of M. M. Davis are true, California has a higher ratio of dentists per population than any

other state in the Union. This speaks for an appreciation of dental service in California as well as a volume to supply the demand.

You apparently approve of the facilities for higher education for the man who wants it, and that is just what this university is trying to do. In support of that procedure I would ask you to read an article entitled "Teaching Orthodontia in Dental Schools," published in the *Bulletin of the Pacific Coast Society of Orthodontists*, December 23, 1923, repeated in the *Pacific Dental Gazette*, January, 1924, pages 1-6, and the *International Journal of Orthodontia and Oral Surgery*, March, 1924, pages 156-160.

You will find an educational chart included in the article which portrays graphically the ideas we hold generally with regard to the different terminal facilities in the dental educational system. This university is now giving consideration to the adoption of a plan of maintaining a four-year course in dentistry leading to a B. S. degree and establishing or utilizing other courses that will lead to the D. D. Sc. degree at the end of seven years, with the M. S. degree available in course. Graduation at any point will en-

title one to practice on passing the Board.

It is no new policy in university life, being the normal in universities all over the world for centuries, and most dental colleges hesitate to accept the plan because they will thus sacrifice a noble title cheaply obtained.

The lock system does not prevail in this university. Students may graduate in May, in September, and in December. Duly accredited courses are offered in the intersession and summer session, approved by the president, and these make it possible to "get time off for good behavior."

You state "The important thing in training dental students is to teach them to be dentists". What or who is a dentist?

In conclusion, may I suggest that if you wish to know anything about the policies or purposes of this college, there are two fairly reliable methods of obtaining it; one is by writing to this office and the other is by sending someone here in whom you may have confidence to obtain it directly.

Very cordially yours,

GUY S. MILLBERRY, *Dean.*

University of California,
Dental Department.
Berkeley, California

Krupps Making Teeth of Steel

BERLIN—(Copyright 1924, New York Times Co.)—Krupps' latest departure is the manufacture of single and double rows of artificial teeth of steel, of which formerly Krupps made their famous guns.

For the present, eight dentists are employed in this new department, but the durability of enameled steel teeth, it is hoped, will soon make them very popular and an extension of the department necessary.



How Dental Health Week Was Observed by the Reading, Pa., Dental Society

SOMETIME in December of 1923 Dr. C. J. Hollister, Chief of the Dental Division, State Department of Health, Harrisburg, Pa., suggested the idea of conducting a dental health campaign, to several members of our Society, as a means of properly instructing the public-at-large in matters concerning dental hygiene.

The members of the Reading Dental Society believed that the great mass of people were indifferent to dental hygiene, not so much because of the fact that they naturally leaned that way, but rather because its true value in relation to the general health of the individual had not been brought home to them.

We were aware of the fact that if the teeth of the individual are kept in first-class condition from infancy, the child will grow up to a better citizen, thereby becoming an asset rather than a liability to the community, the state and the country; furthermore, teaching the child the proper way to clean the teeth and the many reasons for doing

so will readily suggest the idea of being clean in other respects—in personal appearance, in habits and in morals. The clean child is rarely troublesome. The type of children found in juvenile courts are not the issue of the above-mentioned class.

After due consideration the Society decided to carry out the dental health campaign. Co-operating with Dr. Hollister, a program for the week was planned.

The week of February 11 to 16 having been decided upon, the first step was properly to advertise it as Dental Health Week. To do this thoroughly the slogan, "Dental Health Week, Watch Your Teeth," was adopted. This slogan, together with proper dates, was printed in blue on white stickers, 10 x 6¼ inches. The stickers were distributed to automobilists, to be fastened on the windshield. The same slogan was printed on cards, 28 x 22 inches, for window display.

The local traction company co-operated with the movement by printing, at their expense, the same slogan, which they carried

on both ends of their cars, free of charge, for the entire week.

A press committee wrote appropriate articles from time to time, which were published in the daily papers. The radio was resorted to, a general talk on dental health, together with the program, was broadcast on Saturday previous to the Health Week.

Feeling that the idea of dental hygiene could be brought before the great mass of people more clearly by showing them actual work, a display window in Reading's largest department store was solicited, and it was cheerfully donated for the entire week by the firm. A portable outfit was placed in the window and two hygienists operated on children, supplied by the local hygienists from the public schools, daily from 11 a. m. to 1 p. m. and from 2 to 4 p. m. It is needless to say that this attracted throngs of people and was the most widely discussed subject during the entire week.

In these various ways we brought to the attention of many thousands of people the object of the week.

Dr. Hollister cheerfully offered his services, and it was through his untiring efforts, together with the valuable services rendered by Miss Philbrook and Professor Happy, of the Phila-

delphia Inter-State Dairy Council; Dr. C. H. Garwood, Superintendent of the Harrisburg Schools, and the co-operation of the local dental hygienists and school districts, that we were able to carry our message to the public in so thorough a manner.

The Quota, Rotary, Kiwanis and Lions' Clubs had dental health programs at their noon-day luncheons during the week. Dr. Hollister addressed the members of each of these organizations. A toothbrush drill, together with songs, by school children, under the supervision of the school dental hygienist, made the message an impressive one to the business men and women of the city.

As proof of the fact that the message "went home," we have to offer resolutions adopted by each of the civic organizations, urging the School Board to employ at least five additional dental hygienists for the coming year.

A one-reel picture, "A Story About Teeth and How to Take Care of Them," was shown in various theaters each day during the week by the courtesy of the theater managers.

We feel that we covered the territory thoroughly and reached directly at the various gatherings approximately 15,000 individuals, and indirectly many thousands more.





Tuberculosis might strike your home today

THERE is no precaution too great for you to take to protect your home and family from tuberculosis. Your children are constantly exposed to tuberculosis germs. The one effective protection against tuberculosis is the organized, co-operative campaign to stamp out the disease. It can be stamped out. Only half as many people die from tuberculosis today as died ten years ago. The organized battle against tuberculosis, carried on by the Tuberculosis Associations, has helped to save the other half.

Tuberculosis Associations are financed by the annual sale of Christmas Seals. One tangible, sure way to protect yourself and your family against tuberculosis is to buy Christmas Seals.

Buy Christmas Seals. Buy as many as you can. Seal every letter, Christmas card, and Christmas parcel with Christmas Seals.



STAMP OUT
TUBERCULOSIS
WITH
CHRISTMAS
SEALS

The National, State, and Local Tuberculosis Associations
of the United States

The Man Whom throu

"The fierce extremity of suffering of surgery has been steeped in the waters of forgetfulness, and the deepest furrow in the knotted brow of agony has been smoothed forever."

OLIVER WENDELL HOLMES, M. D.



THE Charlton Reunion and Old Home Day Association, in 1919, the centenary year of the birth of Dr. Morton, appointed a committee with power to appoint sub-committees, to erect a permanent memorial at Charlton, Massachusetts, to her honored son, Dr. William Thomas Green Morton, the discoverer of the anesthetic properties of ether.

The dedication took place on September 1st, 1924, and ORAL HYGIENE presents the dedication addresses.

An Address By Dr. Francis M. Rackemann

THE sixteenth day of October is an anniversary of world-wide importance. It is celebrated each year with appropriate exercises at the Massachusetts General Hospital and often in other places. On Ether Day, the former house officers return to Boston and come together once again to show their respect for the hospital where they were trained and show their appreciation of the great

discovery which was made by Dr. William Thomas Green Morton, in 1846, within its walls.

The discovery of ether is not only the greatest achievement of the hospital, but it was the first of the really great advances in medical science made during the nineteenth century. And for a time it was the only advance. Pasteur's discovery that germs were the cause of disease did not come until 1870, twenty-four years later, and whereas ether had brought about, as Weir Mitchell puts it, the "Death of Pain" and rendered surgery painless, the discoveries of Pasteur and Lord Lister regarding germs and antiseptics made surgery safe, and none of you need to be told what painless surgery and safe surgery have meant to the world in general, and perhaps to many of you in particular.

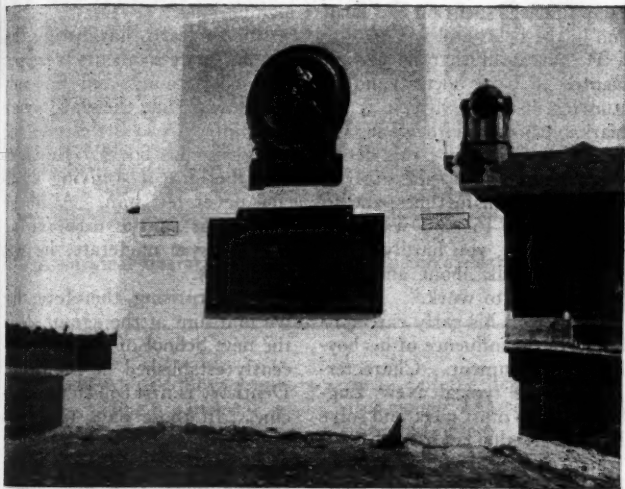
Many features of the discovery of ether are worthy of discussion.

Dr. Morton must have been an extraordinary man, and I would call your attention to several features of his life and work

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The Smoothed Brow of Agony



The tablet bears this inscription:

William T. G. Morton, Dentist, Discoverer of Ether Anesthesia. Notable Contributor to the Advancement of Surgery. First Public Demonstration at the Massachusetts General Hospital, October 16, 1846. Born in Charlton, August 9, 1819. Died in New York, July 15, 1868.

which are not ordinarily referred to. For example, is it not remarkable that one of the greatest blessings to mankind should have been discovered by a man only twenty-seven years old? In your age of college education and post graduate study, it is the rule for medical education, at least, to be prolonged until well after the youthful period, and it is to us surprising that such a re-

markable and extraordinary advance in our knowledge should have been made after only four years of study. This fact, however, is not without a parallel in our time since, as some of you may know, the discovery of insulin, the new cure for diabetes, was made with the able assistance of a man only twenty-five years old, who has not even yet graduated from Toronto Uni-

versity, but who shares the Nobel prize.

The story of Dr. Morton's early life most of you know. Here in this beautiful country town he was born and here his early life was spent on the farm and in the fields and woods.

We are told that he always wanted to be a doctor, and in studying his early life it is remarkable to see with what persistence and tenacity this desire was maintained in spite of a series of early misfortunes, and in spite of Dr. Pierce's warning: "Young man, you hardly know what you talk about and how hard I have to work."

How well his early career illustrates the influence of his boyhood environment. Characteristic of the typical New Englander, who must meet and solve by himself the real problems which occur each day, Morton exhibited a rare degree of initiative, intelligence, and especially the quality which has been called stick-to-it-iveness.

Medicine in those early days was learned mainly by apprenticeship to some eminent practitioner. The student of medicine had none of the advantages of hospitals, libraries and well-appointed laboratories which students have today. Preliminary education along general lines was required. This education Morton obtained in country schools and in the academies of surrounding towns.

But there were early misfortunes. We are told that Dr. Morton's school work was interrupted by an unjust punishment.

We are told that later his father's business failed and it became necessary for him to stop his studies and go to Boston, where he entered a publishing house to spend his days doing manual labor.

But we learn that during this time his spare moments were put to good account, and his only regret was that the day's work left him with so little time and energy for his books. But note that the idea of studying medicine never left him. Although his success in the publishing business was moderate, he was not happy.

It is surprising, therefore, that we find him at the age of 21 in the new School of Dentistry recently established in Baltimore. Dentistry is first cousin to Medicine. In those days little was known of it, and the suffering from bad teeth must have been considerable. It is not surprising, therefore, that in dentistry Morton should find a suitable outlet for his desire to be of service to mankind.

Now we see the scientific attitude of this young man who was then only 25 years old. Teeth in those days were removed. They were not extracted, but the roots were broken off and left in place, where the diseased process at the bottom could remain active. Think of the ability of the man that he should recognize that these roots must be removed.

But to remove them meant pain and intense suffering to the patient—a stumbling block which simply had to be crossed

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A surgical operation prior to Dr. Morton's discovery.

if success were to follow proper treatment. The use of local applications in the form of various drugs was not wholly satisfactory, although it helped somewhat.

In the meantime, in 1844, Morton entered the Harvard Medical School where he attended the full course of lectures, and in addition to this school work continued to practice dental surgery and make artificial teeth.

His skill grew. His practice also grew, and if we can believe the story this practice must have been tremendous when materials for making artificial teeth were ordered in hundred pound lots, and the income of his business was measured in thousands of dollars per year. What a contrast this is to the experience of the young man of today two

years out of the dental school.

But young Morton clung to his original object. He was determined that tooth roots should be extracted, and extracted painlessly. Ether was one of the drugs which he placed directly on the tooth to deaden the pain, and he was quick to notice that when considerable quantities were used the patient became groggy. This was an important observation, and it was not long before we find him experimenting with it.

I quote from "Trials of a Public Benefactor", written by Dr. Nathan P. Rice in 1859:

Taking with him a quantity of sulphuric ether, Morton repaired to the country, where, among several experiments which he made with it, the most marked and satisfactory was upon a water spaniel. The ether was poured upon some cotton in the bottom of a tin pan, and the dog's head was held di-

rectly over it. In a short time (to use Dr. Morton's words) "the dog wilted completely away" in his hands, and remained insensible to all his efforts to "arouse him by moving or pinching him"; and yet after the removal of the pan, became in two or three minutes as lively and conscious as ever. Here was the effect sought, and here was demonstrated a complete success.

The next step was to try it on a man—and first on himself. Again I quote from his own description:

Taking the tube and flask, I shut myself up in my room, seated myself in the operating chair, and commenced inhaling. I found the ether so strong that it partially suffocated me, but produced no decided effect. I then saturated my handkerchief and inhaled it from that. I looked at my watch and soon lost consciousness. As I recovered I felt a numbness in my limbs, with a sensation like nightmare, and would have given the world for someone to come and arouse me. I thought for a moment I should die in that state, and the world would only pity or ridicule my folly. At length I felt a slight tingling of the blood in the end of my third finger, and made an effort to touch it with my thumb, but without success. At a second effort I touched it but there seemed to be no sensation. I gradually raised my arm and pinched my thigh, but I could see that sensation was imperfect. I attempted to rise from my chair, but fell back. Gradually I regained power over my limbs, and full consciousness. I immediately looked at my watch, and found that I had been insensible between seven and eight minutes.

Morton was delighted with this experiment. That same day came a Mr. Frost with a severe toothache who wanted to be "mesmerized," but on learning that Morton had something better, quickly submitted to the

ether, and the tooth was quickly and easily extracted without pain of any kind. What a thrill this young investigator must have felt! No wonder he was anxious to study the subject further.

Again we find the attitude of the true scientist. Here was a young man coming into his prime, with a large practice and many patients: a man who, having made a discovery, resolved at once and without hesitation to give up this large and lucrative practice to devote himself to the cause which he recognized as so great.

I must emphasize that his life was directed along a straight line toward a single purpose, the relief of suffering by the removal of bad teeth, and that the discovery of ether was only a means to the original end.

What a clear vision and a dogged persistence this extraordinary man displayed!

His wife writes that on October 16, 1846, the day of the great demonstration at the Massachusetts General Hospital, Dr. Morton came home to her with gloomy manner and evident depression. This gives a suggestion of what mental suffering he must have endured.

Just picture if you can this young man only 27 years old, going to an old institution there to demonstrate such a dramatic thing as ether anesthesia, to the most distinguished physicians and surgeons of that day!

Suppose the ether had not produced insensibility to pain or

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suppose that the patient had died from the effects.

What a tremendous responsibility he undertook and what tremendous courage and fortitude he displayed in daring to present his discovery in this way—is it any wonder that when it was over the reaction was intense?

I do not suppose that many of you realize the full significance of what Morton's discovery has meant to the world. Of course it is easy to appreciate the contrast between operations of that time and those of today. The big straps still attached to the chairs in the old operating amphitheatre at the Massachusetts General Hospital; the hooks firmly bolted to the wall; the ropes and blocks in the corner—are mute evidence of what went on there at one time. I dare say all of you have smelt ether at one time or another, and no doubt many of you have been under the influence, but I doubt if any of us can have the slightest conception of what such an operation as the amputation of a leg must have been without anesthesia.

The relief of suffering has certainly been extraordinary. But aside from the purely humanitarian point of view, I am certain you can appreciate how difficult it must have been to work on a patient who was screaming and struggling during the operation. How about operations on the more delicate parts of the body, the painstaking and very careful transplanting of tendons to correct the

deformity of infantile paralysis; the removal of a piece of bone from the legs to be transplanted into a spine when the bones there are distorted by disease or some operation on the head or brain. These things are only possible now when the patient is absolutely relaxed and quiet. The slightest slip of the surgeon's knife, or movement on the part of the patient, would spell disaster; and so the discovery of ether has extended the field of surgery to an extraordinary degree.

But the discovery of ether has led to still another series of advances.

Do you suppose that when a surgeon removed a kidney that he first removed a man's kidney? What do you suppose happens when a spleen is removed, and how could this be investigated and studied? Is it entirely safe to remove a spleen? What about the heart?

Quite recently a surgeon at the Peter Bent Brigham Hospital in Boston has been able to operate on the heart so as to enlarge the opening of one of the valves, and thus bring considerable relief to a victim of valvular heart disease.

Do you suppose that he devised the operation and then experimented first on his patient? Of course not.

The use of animals for surgery of all sorts has been quite essential—but doctors are human, just as you are; the cry of a dog or the scream of a cat is as real to them as it is to you.

The administration of ether,

however, has ended the animal's suffering so that all these surgical procedures could be tried out on them without pain of any kind. On animals, operations could be performed in various ways, perhaps, to find the best method before using it on a patient. And how much animal experimentation has added to our knowledge?

I referred to diabetes and its new treatment with insulin. It was by tying off the duct of a dog's pancreas that Dr. Banting and Mr. Best succeeded in discovering this other substance which is produced by the gland.

Most of you know that diphtheria antitoxin is made from the blood of a horse which has been immunized against the diphtheria germs, and I could add other illustrations of how the use of a few animals, in an absolutely humane manner in the laboratory, has resulted in the saving of countless human lives.

And now I think of one more point. The later story of Dr. Morton's life is sad indeed. His great work was done at the age of twenty-seven, but he lived for twenty-two years afterwards a life full of distress and anxiety. The value to mankind of his discovery was soon recognized by the hospital and by the medical societies; and we can all imagine how such an important discovery might rightly bear with it a handsome financial reward.

On this count Morton was beset by a number of men jealous of his success, who, in the hope of securing a share, large

or small, in this financial return, tried to take the honor and glory from him. His former partner, who the year before had introduced "laughing gas," claimed to have given Morton the idea of producing insensibility by inhaling a gas. A man in Georgia named Long who, three years before, had administered ether to a patient, but who was so indifferent as not to realize what he had done, made a feeble effort to claim priority. A chemist in Boston and a friend of Morton, who had made some technical suggestions early in the work, tried to assume an important rôle.

Dr. William H. Welch has summarized the results of a controversy, which was so bitter when he said, "The chief glory belongs to Morton's deed in demonstrating publicly and convincingly the applicability of anesthetic inhalation for surgical purposes and under such fortunate circumstances that the knowledge became, as quickly as it could be, the blessed possession of the whole world."

How different is all this from the generous, hearty co-operation which obtains today where an important discovery made in one hospital by a group of men is immediately communicated to other hospitals and other groups with the express purpose of asking those other men to try the new method, or the new drug, to see if results in different hands will be the same. And yet in spite of this hearty co-operation, the credit is placed where it belongs. This appeals to me as a

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hopeful thought on the development of science and of the drawing together of all workers for the common welfare.

And now, my friends, I fear I have given you something of a sermon. I am deeply appreciative of the opportunity which your Committee has given me to come before you, and I am greatly honored by being here on this occasion as the representative of such an institution as the Massachusetts General Hospital. I congratulate the town most heartily on the recognition of what Dr. Morton has done for the civilized world and on their splendid tribute to his memory.

Address of Dr. Frank P. Barnard

THE quarryman has torn this solid block of granite from old mother earth, the craftsman has wrought it into shape, the sculptor has given us the results of his creative mind, and all have been united to form this beautiful memorial which you now behold.

The workman has set it in position, paying due respect to all natural laws, making it on the level and on the plumb, here to stand for centuries I believe and hope.

Miss Gould, the daughter of one of the physicians present at that memorable demonstration in 1846, has very graciously and in a pleasing manner unveiled it, and to me comes the honor, and it is indeed a great honor, to be

assigned the task of saying a few words concerning Dr. Morton in transferring this memorial to the town of Charlton.

I think it well to call your attention first to the origin of the movement to have this memorial erected here. A few years ago, in the office of my esteemed co-worker Roy A. Bush of Worcester, he made the remark to me that he and Mr. Charles Sumner Dodge thought it would be appropriate to do something in the way of proclaiming to the people, that one hundred years ago there was born on yonder hill a man who became famous and whose memory should be perpetuated.

It was first taken up by the Massachusetts State Dental Society, which appropriated one hundred dollars for preliminary work. Later on it appropriated five hundred dollars and appointed a committee to work in conjunction with a committee from Charlton and neighboring towns. The committee as organized is as follows: Dr. Roy A. Bush, Worcester, President; Dr. A. A. Bemis, Spencer, Secretary, and Mr. A. F. Putnam, Charlton, Treasurer. It was our intention originally to have done this in 1919, which would have commemorated the one hundredth anniversary of Dr. Morton's birth, but conditions immediately following the signing of the armistice were such that we deemed it inadvisable to proceed, but now we have done our work and offer this to you as a finished product, the outcome of our efforts.

Thirty years ago this month I entered Harvard Dental School, commencing my professional career, and almost from the first day the names of Morton and Wells were used in much the same manner as is Edison's today in connection with any subject pertaining to electricity.

There were four men whose followers made claims for them, namely Doctors Long, Jackson, Wells and Morton, and the question was fought out for over forty years as to who actually discovered and first used ether as an anesthetic for the relief of pain in surgical operations, but, on January 29th, 1921, in the *Medical Record* appeared an article headed as follows: "William T. G. Morton, the discoverer and revealer of surgical anesthesia at last in the Hall of Fame. A Vindication. This decision is final. We cannot do otherwise, but accept it as an unbiased, unprejudiced opinion, rendered only after thorough investigation." Frances Darwin has said: "In science credit goes to the man who convinces the world, not to the man to whom the idea first occurs."

While Long waited and Wells turned back and Jackson was thinking and those to whom they talked were neither acting nor thinking, Morton, the practical man, went to work and worked resolutely. He gave ether successfully in several surgical operations, he loudly proclaimed his deeds and he compelled mankind to hear him.

Our never-to-be-forgotten Osler, with his keen sense of jus-

tice, gave us the result of his profound study of historical medicine concerning Morton's share in the discovery and promulgation of ether anesthesia in the following words: "William T. G. Morton was a new Prometheus who gave a gift to the world as rich as that of fire, the greatest single gift ever made to suffering humanity." And Professor Welch confirms the investigation of his life-long friend and says: "Surgical anesthesia has been America's greatest contribution to medicine and surgery."

The man who gave the anesthetic upon that memorable occasion, October 16th, 1846, at the Massachusetts General Hospital was Dr. William Thomas Green Morton, the most outstanding figure in American Medicine. He had experimented with sulphuric ether, had demonstrated its efficiency and sought an opportunity to show its efficiency in general surgery. He assumed the sole responsibility of the demonstration. His enterprise, his enthusiasm and his courage brought success. Whatever suggestions or assistance he may have received from others, he was the man that made anesthesia a practical, everyday blessing to mankind.

Dr. Morton was a man of pleasing personality, always faultlessly dressed, extremely courteous, and evidently controlled by a highly organized nervous system.

It was due to his restless nervous activity that anesthesia was finally brought to a public test.

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His advocacy and practice of anesthesia in dentistry created a host of enemies, who sought his ruin. He met them with ever renewed instances of success and finally with the famous operation of Professor Warren on the 16th of October 1846 at the Massachusetts General Hospital. Even at this operation his enemies took advantage of a slight delay in the appearance of Dr. Morton to impress the large audience of Boston's most prominent physicians and surgeons that he did not dare face a real trial of his vaunted anesthetic. It was only at the conclusion of the operation, when Dr. Warren spoke these words: "Gentlemen, this is no humbug," that they were silenced.

William T. G. Morton studied dentistry in Baltimore, and hoped by the practice of dentistry to gain funds to study medicine. In due time he matriculated at Harvard as a medical student. He did not complete his education in Medicine, but received from Harvard the honorary degree of M. D. for his great achievements in revealing and promulgating general anesthesia in surgery. Morton died in 1869 a poor man, heartbroken because he failed to receive the recognition which was his due.

A REVELATION OF GENERAL ANESTHESIA IN SURGERY AND OBSTETRICS.

A TRIBUTE TO THOMAS GREEN MORTON.

There was a time when man believed

That pain and suffering were decreed by God

That always at the hour of birth

The mother had to suffer and to bear

The agony which Heaven sent

Before she could embrace the child

For which her heart had longed and prayed;

And even priests who taught the word of God

Professed it was the will of the Most High.

They said "it ever has been and it must

Forever be the same, for any change

Would be to disobey the word of God."

The mothers were resigned to suffer thus

And bear their children as it seemed decreed.

Then with the Progress of mankind in art

In science and in industry,
With steamship, railroad, mill and factory,

Came many accidents to life and limb

And suffering from all kinds of injury;

And with them all there still must come

The horrors of recurrent war,
With wounds from gun, from cannon, and from shell,

Our fathers, skilled in medicine

And in the art of surgical relief,

Wrought wonders in their way, yet in their work

Were hindered, for the pa-
 tients could not stand
 The pain and suffering long
 enough
 That needed reparation might
 be made.
 All sorts of means were tried
 to still the pain
 While surgeons' hands sought
 ultimate relief,
 But none seemed sure and
 lasting;
 Until there came, inspired by
 Heaven,
 A man who bravely faced the
 doubting world
 And dared to show that in
 God's realm
 There are means of calming
 pain
 And during childbirth giving
 peaceful sleep,
 And sleep to the patients
 while the surgeons worked
 To skillfully remove or re-
 place anew
 What led again to health and
 happiness.
 This man we honor now as
 one of those—
 The greatest benefactors of
 mankind.
 Disciples by the thousands in
 this land
 And other lands are practic-
 ing his art,
 And millions of restored do
 call him blessed,
 This man so much revered
 and honored now,
 Did not receive in life his due
 reward,
 Misunderstanding and mis-
 understood,
 He suffered much in heart
 and mind,

But now at last has justice
 come to him,
 And yonder within the sacred
 Hall of Fame,
 Valhalla of our great and
 noble men,
 We read the name of him
 who did reveal
 Unto mankind, a gift so great,
 so good,
 That reverently we call the
 gift divine,
 It came from God and was
 revealed through him,
 Whom we to honor gather
 here today,
 To him at last has come im-
 mortal fame
Consilio, animis et dei gratia
 Through wisdom, courage
 and the grace of God.

And now Mr. Lamb, as the
 official representative of the
 town of Charlton I commit this
 into your hands for safe keeping,
 knowing full well that you and
 your successors will cherish and
 care for it so long as people shall
 live and congregate here, or un-
 til the elements shall reduce it
 to dust and it returns to mother
 earth from whence it came.

And now let me conclude my
 remarks by repeating the words
 of Longfellow when he says:
 Lives of great men all remind us
 We can make our lives sublime,
 And, departing, leave behind us
 Footprints on the sands of time.
 Footprints that perhaps another,
 Sailing o'er life's solemn main,
 A forlorn and shipwrecked brother,
 Seeing shall take heart again.
 Let us, then, be up and doing,
 With a heart for any fate;
 Still achieving, still pursuing,
 Learn to labor and to wait.

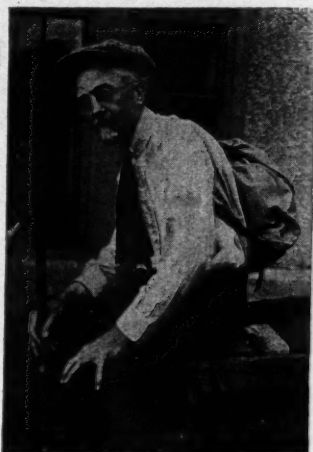
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Wide W

Dr. Owre, Cross-Country Hiker

Dean Alfred Owre, dean of the school of Dentistry at the University of Minnesota, recently returned to Minneapolis after another long hike. This year he hiked from Chicago to New York. The only equipment the Dean carries is his pet cane and a light knapsack in which he has his supply of rye hardtack, the principal article of his diet. Dean Owre has made several cross-country hikes and has walked in almost every country in the world.



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Wide World Photo

Congressman-Dentist

Congressman Roy Orchard Woodruff, Republican from Michigan, was a dental surgeon before coming to Congress. He received his degree of Dental Surgery from the Detroit College of Medicine and practised his profession for ten years in Bay City. He served in the army during the world war and rose to the rank of Major.



Dental Health Week---Its Observance in York, Pa.



SHORTLY before the Christmas holidays of 1923 Dr. C. J. Hollister, Chief of the State Dental Division, made a flying trip to York. For some time past several members of the local dental society had been cherishing an idea of putting a dental health program before the laity at large, believing that the public were, for the most part, ignorant of the great importance of mouth hygiene in its relation to the general health of the individual, and of its especial importance in childhood.

Upon Dr. Hollister's second visit to York, his suggestion was adopted and tentative plans were made for York's Dental Health Week, this plan including a complete lecture course in the schools during the months of January and February.

Two volunteer hygienists, co-operating with the school hygienist, established a contest between the fourth and fifth grades in all of the 22 schools of York for clean teeth, selecting these grades because of their adaptability to the work and because of the short space of time allowed. Besides the general health and nutrition lectures, the hygienists used adaptable posters, samples of tooth pastes,

clean teeth charts, booklets and other literature to accomplish their purpose.

March 3d to 8th was the week selected for the campaign. Previous to this week, the fact of it was heralded by automobile posters bearing the slogan, "Dental Health Week, Watch Your Teeth, March 3d to 8th."

The street cars also carried large cards bearing the same slogan.

When March 3d came, if the public had not as yet heard of Health Week, at least the children had. They were in a high state of excitement, due to the fact that a prize had been offered by the Dental Society to the fourth or fifth grades in each building having the highest percentage of mouths in first-class condition, and a general prize to the best room in the city.

The drug stores in and around the center of the town co-operated by having displays of dentifrices, tooth brushes and other oral hygiene accessories. The papers published some appropriate notices, from time to time, following the active doings of Dr. Hollister.

A large furniture store near the Center Square donated a window in which a portable outfit was placed—two hygienists operated daily from 11 a. m. to

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A large furniture store near the Center Square donated a window in which a portable outfit was placed—two hygienists operated daily from 11 a. m. to 1 p. m. and from 2 to 4 p. m. This window attracted much attention and helped spread the gospel of clean teeth and mouth hygiene.

1 p. m. and from 2 to 4 p. m. This window attracted much attention and helped spread the gospel of clean teeth and mouth hygiene.

Thanks to Dr. Hollister, who, as usual, was untiring in his efforts, together with Miss

Mitchell, his hygienist; Miss Philbrook, of the Philadelphia Inter-State Dairy Council, and Miss States, the school hygienist, we feel that our message was put across to a large number of people.

The different clubs of the city

—the Quota Club, the Lions' Club, the Medical Society, the Dental Society, etc. — all had health programs during the week. At some of these meetings, in conjunction with Dr. Hollister's talks, Miss Philbrook gave her "Chalk Talk," and playlets, "Who Says Six-Year Molars?" and "Where Is My Tooth Brush?" were presented, which brought home a message to these organizations.

A general community meeting for adults was planned for Thursday evening of that week. While there were a great many adults present, the subject attracted the children, who came in seeming eager to hear Dr. Hollister. At this meeting Dr. Hollister addressed both the children and the adults. At the

same time there were three playlets presented, which amused as well as educated the children.

On Thursday afternoon the teeth of all the school children in the city were examined by volunteer members of the Dental Society, the Superintendent of Schools co-operating with them. The teeth were examined for cleaning, extraction and filling, and a notification and recommendation was then sent home to the parents.

Altogether, we believe that the message went home, at least to the school children — three rooms out of the 45 rooms included in the fourth and fifth grade contest having an average of 75 per cent of the children in the room with mouths in first-class condition.

Editor ORAL HYGIENE:

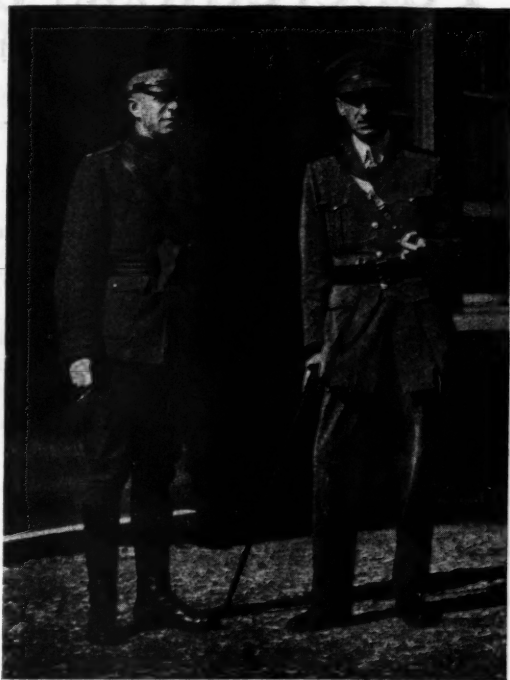
It gave the many friends of Dr. Thomas P. Hinman very great pleasure to learn from the article which appeared in the August number of ORAL HYGIENE by Dr. Nathaniel G. Slaughter, that Dr. Hinman's work in the interest of the profession had been recognized by the University of Georgia by the conferring of the honorary degree of Doctor of Science upon him. Dr. Hinman richly deserved this honor.

I am sure that it will please the members of the profession that do not know of it to learn that Dr. J. C. Watkins of Winston-Salem, N. C., has also been honored for his work for dentistry in North Carolina by having the degree of Doctor of Science conferred upon him by Wake Forest College of North Carolina. Dr. Watkins received his degree in May, 1922. In order that his friends in the profession may learn of the honor that has come to him I would thank you to publish this in ORAL HYGIENE.

Very truly yours,

GUY R. HARRISON, D. D. S.

McGuire Clinic,
St. Luke's Hospital,
Richmond, Virginia.



Dr. Pickerill (right) and the Editor of ORAL HYGIENE; from a photograph taken at Queen's Hospital, Sidcup, Kent, England, in 1918.

Next Month

A MOST important and interesting paper upon "Salivary Secretion and Acid Dentifrices" by Dr. H. P. Pickerill, Dean of the Dental School, University of Otago, Dunedin, New Zealand, has arrived too late for this issue of ORAL HYGIENE. This paper will appear in the December number of ORAL HYGIENE. Dr. Pickerill is known throughout the world as the authority upon human saliva.

Tuberculosis and Dis

By HERMAN BRODY, D. M. D., Springfield, Mass.

Formerly Chief of the Dental Service of the William Wirt Winchester Hospital for Tuberculosis, New Haven, Conn.; formerly Dental Surgeon to the Tuberculosis Sanatoria at Whipple Barracks, Ariz.

TUBERCULOSIS is a virulent and communicable disease; it is due to a specific bacillus and is characterized by the formation of nodular bodies (tubercles) from which it takes its name.

Cause: Bacillus tuberculosis (Koch).

Localized: Practically everywhere, lungs (phthisis, consumption); lymph glands (scrofula); bones; joints, abdominal viscera; brain; skin (lupus vulgaris); etc.

Entry: By air passages and by the mouth* with food and drink; also through wounds of the skin and mucous membrane.

Exit: In all discharges from diseased tissues; as lungs are most frequently the seat of disease, the sputum is the most common vehicle of discharge.

Contracted: By prolonged contact with consumptives†; it is believed that infants contract

*BRODY, HERMAN: "The Mouth as the Gateway to Tuberculosis," *Dental Cosmos*, February, 1923.

†It will suffice to say that the most frequent mode of dissemination is through the introduction into the mouth, the specific causative organisms, by the hands that have been soiled with sputum or secretions from the patient; by kissing, caressing, by using the same eating utensils and drinking from the vessels used by the patients.

the disease by drinking milk from tubercular cows.

Frequency of Tuberculosis

Tuberculosis is the most frequent and widespread of major diseases. Its frequency may be appreciated when we recall that Dr. Naegeli of Zürich, discovered at post-mortem examinations evidence of the occurrence of tuberculosis in 96 per cent of the bodies.

Sherman Bonney, in his work on "Pulmonary Tuberculosis", states that "from 85 per cent to 95 per cent. of the human race has been, at some period of its life, subject to tuberculous infection". Von Behring asserts, "we are all a bit tuberculous". Such statements can be proved by the fact that nearly all individuals over two years of age give a positive von Pirquet tuberculin test.

Rosenau, in his work entitled, "Preventive Medicine and Hygiene," states as follows: "In the United States it is estimated that 160,000 persons die each year of tuberculosis. Of the 100,000,000 people now living in this country, it is estimated that 9,000,000 are doomed to tuberculosis, unless the disease is checked. The loss in life and treasure is appalling."

Diseased Teeth



A group of children taking the sun cure to avoid tuberculosis.

Tuberculosis a Disease of Childhood

It is now maintained that wherever tuberculosis is found, it has started in the first years of childhood. Von Behring was the first to claim this; he stated: "An infantile tuberculous infection predisposes to pulmonary consumption."

From birth a conflict in the body takes place between tuberculous infection and the resistance of the child. In the event the resistance is strong, the disease cannot develop; should it be weakened by any influences which undermine the vitality of the body, tuberculous infection

gets control and the disease develops. It is possible that the struggle between infection and resistance takes place in nearly all individuals, for evidence of the presence of tuberculous lesions, in either active or healed state, has been found in 96 per cent of a large number of post-mortem examinations, as we have previously stated.

But there is a sharp distinction between *tuberculous infection* and *tuberculous disease*; not everyone infected with the tubercle bacilli is destined to acquire the disease. If the resistance of the individual is good, tuberculous infection can be held

in check for an entire lifetime.

Persons who have once been infected with tuberculosis are protected through immunity against the omnipresent tubercle bacilli, while persons who have not become infected in childhood have no resistance and succumb to the disease. The American Indians coming in contact with the whites and incidentally with the tubercle bacilli are being decimated by the disease, which runs an acute and fatal course with them, and the same is true of the negroes. (Fishberg.)

At one time it was thought that tuberculosis was hereditary. Now it is conceded that such is not the case, or at least that this mode of transmission plays a minor rôle. On the other hand a constitutional susceptibility may be transmitted, that is, a soil favorable to the growth of the tubercle bacilli. It has been proved that the child becomes infected from its parents post-genitally and because it lives in a tuberculous environment.

With the aid of such deductions, we should wage war against tuberculosis when it is most dangerous — in the child. Upon the personal hygiene of the child depends whether or not he becomes consumptive. All debilitating circumstances render the body less able to keep the tubercle bacilli in check.

The Teeth and Tuberculosis

Carious and putrescent teeth are a real predisposing cause to tuberculosis. Such teeth become human culture tubes with ideal

culture media for the tubercle bacilli. Putrescent teeth may afford lodgment and a portal of entry for the bacilli which may penetrate the root canals and cause inflammations of the glands of the neck. This fact is emphasized by Coplin in his "Manual of Pathology" as follows: "Cervical tuberculosis is clearly the result of infection from the oral and pharyngeal cavities. Halle found that in 3161 children with enlarged cervical glands, 2334 had carious teeth; and of these 1646 corresponded in location with enlarged glands. Odenthal, among 987 children, found decayed teeth in 429; 424 of these had enlarged lymph nodes. Halle demonstrated that if cavities in the teeth of dogs be packed with Prussian blue and cemented, the pigment may, in from two to three days, be present in the nearest lymph nodes. Dieulafoy and others have shown that tonsils frequently without evidence of tuberculosis may contain the bacillus, and that the organism often is present in adenoids."

Diseased teeth not only act as breeding places for the germs of tuberculosis and other diseases, but also by continuity cause catarrhal inflammatory changes in the nasopharynx, pharynx, trachea and bronchi. If these conditions are allowed to persist they injure and break down the epithelium, weaken their defensive powers and open the door to tuberculosis. Especially in children with chronic nasal catarrh, diseased tonsils and adenoids,

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has tuberculosis been stated to be frequent.

It is by no means impossible that infections of the lungs proceed from diseased teeth and a septic mouth. Pulmonary diseases can be caused by the inspiration of particles of decomposed food in and about carious and putrescent teeth, particles of slime or pieces of tartar containing pathogenic bacteria.

Miller, in his work entitled, "Microorganisms of the Human Mouth," furnishes striking proof of the correctness of the supposition that pulmonary diseases occur from the inspiration of pathogenic germs from the mouth. In a case of primary actinomycotic infection of the lungs, a sent to Miller for examination. a piece of dentin was found and sent to Miller for examination. Miller found it to consist of a fragment of dentin surrounded by a chalky mass, presumably salivary calculus. The microscope revealed numerous threads of ray fungi and there is little room for doubt that the fragment of dentin was the carrier of infection.

Diseased teeth can contaminate the very air a child breathes. Obnoxious gases, such as ammonia and hydrogen sulphid which have their origin in putrescent teeth, can be inspired by the child (particularly if he is a mouth-breather and many children are mouth-breathers) and thus help spread disease.

Teeth with exposed pulps, teeth which are afflicted with pericementitis or are abscessed, make the process of mastication

painful and interfere with the nutrition of the child through incomplete mastication. Such conditions are not conducive to good digestion. Good digestion means good resistance to disease.

Good clean food can be contaminated by a septic mouth. Exposed pulps, decomposing food in and about carious and putrescent teeth afford excellent culture media for pathogenic microorganisms which readily can contaminate food during the process of mastication. Pus from abscessed teeth or other suppurations in the mouth can be also directly insalivated with food. Gastritis, enteritis, diarrhea and other digestive disturbances are the results of the continual swallowing of such contaminated food.

Anemia and digestive disturbances are some general causes which predispose the child to tuberculosis and such diseases, as we have just stated, are the consequence of diseased teeth and a septic mouth.

When one examines a septic mouth, with carious teeth, putrescent teeth, abscessed teeth, teeth encrusted with heavy deposits of calculus, inflamed or suppurating gums, he cannot fail to realize that such a condition lowers the power of resistance, especially to tuberculosis.

Conclusions

1. The question of the prophylaxis of tuberculosis should be shifted to the child. (Fishberg.)
2. Diseased teeth and a septic mouth play a preponderating

part in lowering the resistance of the body, especially to tuberculosis.

3. The observation of mouth hygiene is one of the best anti-

tuberculous measures. (Brody.)

4. The care of the mouth and teeth should commence in childhood and be observed throughout life.

The Dental Directory

The publishers of Polk's Dental Register and Directory of the United States and Canada have sent a questionnaire to every dentist whose name could be secured, including the 3,511 who recently graduated. It is seven years since the last Dental Register appeared, and since then over 22,000 have graduated from dental colleges, whose names have never appeared in a Dental Register.

This book has always been of great value to the dental profession, to editors, to publishers, to the dental trade and to all who are in any way interested in the progress of dentistry. A reliable, up-to-date list of dentists, with the additional information which this publication has always presented, is an urgent necessity.

It is manifestly impossible for anyone to compile such a work, to make it complete, reliable and of value to the dentist, without the prompt co-operation of every dental practitioner. It is of great importance and value to the dentist himself that his name and address appear correctly in the Register. The dentist assumes no obligation whatever. Unless the questionnaire is returned, the publisher must omit the name. The profession is urged to co-operate to the fullest extent by filling out the blank (which takes but a few moments), without loss of time after it is received, and mail it to R. L. Polk & Co., 536 South Clark St., Chicago. A return envelope is supplied for this purpose.

Any dentist who has not received a questionnaire, is urgently requested to send in his name and address and a blank form will be sent to him. The important point is *prompt action*, thereby enabling the publishers to do each one justice by recording his full and correct information.

Admission To Dallas Meeting

The House of Delegates at the 1923 meeting at Cleveland passed by unanimous vote an amendment which now makes it impossible for the General Secretary to accept applications for membership at the annual sessions. Therefore, no dentist living in the United States will be permitted to attend the meeting in Dallas unless he is an active member or presents satisfactory credentials from his State Society.

Editorials

REA PROCTOR MCGEE, D.D.S., M.D., *Editor*
212 Jenkins Building, Pittsburgh, Pennsylvania

Associate Editors:

PHILIP R. THOMAS, D.D.S.

E. L. PETTIBONE, D.D.S.



Mr. Fiske Grasps the Big Idea



R. Haley Fiske, president of the Metropolitan Life Insurance Company of New York, appreciates the value of good dentistry.

The Metropolitan Life is using twenty-two of the most prominent lay publications in the United States to spread the truths of mouth hygiene.

This announcement from a full page display in *The Literary Digest* gives the gist of the campaign:

Preventive dentistry—oral prophylaxis—is still new to many people. It is a great step in the work being done for public health. Every year taxpayers are assessed hundreds of thousands of dollars for the re-instruction of children who have failed to be promoted because physical disabilities—frequently caused by the teeth—held them back. Teaching mouth hygiene in the schools—with tooth-brush drills and regular twice-yearly examinations and reparative work—will remove much of the disability and save the taxpayers' money.

Oral hygienists are trained to clean the teeth of school children and to teach them to take proper care of their mouths. Twelve states in the U. S. so far have permitted oral hygienists

to practice in the schools. In 36 states no concentrated effort has been made to save teeth of their future citizens. What is your particular community doing to promote oral prophylaxis for the school children? Local clubs and organizations are helping school boards to introduce oral hygiene into the public schools. This rapidly growing interest is making for a better educated, healthier, happier people. The Metropolitan Life Insurance Company will be glad to mail, free, a copy of a booklet, "Care of the Teeth" to anyone who requests it.

HALEY FISKE, *President.*

It is greatly to be hoped that in the near future a mouth examination will be as necessary a part of the physical examination for life insurance as is the general examination.

Great numbers of lives are ended by focal infection and greater numbers are shortened by inability properly to masticate food.

Mr. Fiske has grasped the big idea.

Time

FOR every minute that he occupies his office the dentist pays real money. Time is the most valuable commodity in the world. Nothing can be done without Time.

Whoever uses the dentist's time during his office hours must either pay for that time or receive that valuable commodity free.

The dentist does not go to other men's offices to solicit business to the detriment of the work that is going on in the other office. If he tried it he would promptly be shown the door.

Why then should every solicitor in the country haunt the dentist's office?

The dentist maintains his office in order to sell his services to the public. Isn't it poor business for him to let the public come to his office to take the dentist's money away from him?

If the dentist wishes to invest money in the other fellow's business, why not go to the other fellow's office? Why should the dentist give his time and pay the rent for the carpetbagger and the solicitor?

Representatives of local supply houses, however, since as a rule they carry with them nothing but an order book and a pencil, do not begin to take up as much time as a bag-man who insists upon telling you all about or demonstrating some item which, if it possesses any merit, can just as well be ordered from the regular dealer with whom you do business.

But did it ever occur to you that the man who comes merely to take orders for supplies you *must* have, is wasting your time if you permit him to do anything more than make a notation of your requirements and be on his way? Would you not save time if you sent your orders for necessities at a time when it was most convenient to you—instead of being interrupted?

Then did it ever occur to you that the salary of the detail man is in the overhead charge of every item you buy? It would be a saving both to the dentist and the dealer if every practitioner placed his own

orders and thereby released the visiting salesman for more intensive work in the supply house.

By regular attendance at local, state and national meetings, the dentist can see experts demonstrate every new idea and product that comes out so that there is no need of office demonstrations of new dental products.

Here again a very expensive overhead charge could be curtailed with the very-much-to-be-desired lessening of supply costs.

Brady



CERTAIN newspaper syndicate writer named Brady who modestly admits that he is famous, although he does not say what he is famous for, has begun to air his ignorance upon dentistry.

Brady's main aversion seems to be the tooth brush and his second best objection is to mouth hygiene in general.

We hope that the doctor has not soured on soap and vaccination.



Growing Strong Teeth



INETY-FIVE per cent of the public school children in the United States are in need of dental attention.

Only ten per cent of the school children in this country are using tooth brushes daily.

The children in the first five grades of the public schools average six good-sized cavities.

Investigation shows that children with defective teeth fall six months behind during the eight-year school course

Neglect of the first teeth and their consequent premature extraction will cause the second teeth to erupt out of their normal position, resulting in improper development of the face and serious effects on the general health.

An experimental group of children instructed in the care of the teeth and their proper use in mastication, showed, at the end of one year, an increase of 99.8 per cent in mental efficiency.

Proper diet, including milk, vegetables, fruits and crusty foods, together with careful home care of the mouth and frequent visits to the dentist, will practically eliminate tooth decay.

It is up to mothers and teachers to realize these things and to get to work at once to remedy conditions.

Strong, healthy teeth are the

result of good nutrition, thorough mastication, adequate prophylactic and dental care.

One of the greatest agencies for teaching mothers and children the value of these things is the American Red Cross.

Through its Nutrition Service this year 135,000 children and 10,000 women have been taught the importance of the proper use of foods.

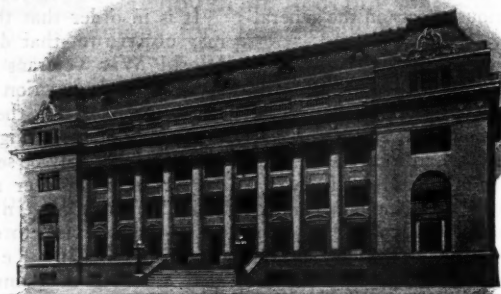
The Red Cross Public Health nurse is responsible for the introduction of the tooth brush drills in many schools of America. Within the year 974 of these nurses have aided in the care of the sick, guarded the health of children and fostered an understanding of personal and community hygiene.

It is in order that this work may continue, that disabled World War veterans may be served, that instruction in home hygiene and care of the sick, in first aid and life-saving may go on, that relief may be sent wherever there is disaster and that children may continue to be trained for service, through the American Junior Red Cross, that the Eighth Annual Roll Call will be held. The dates are from Armistice Day to Thanksgiving — November 11th-27th. Your signature and a dollar bill will admit you to the fellowship. So little is asked. So great is the need. Have you the heart to refuse?

The City of



If you motor to the convention you will want to try out
Lakeside Drive, Highland Park, Dallas.



**Municipal Building, Dallas, where the city fathers hold
forth.**

Hour



Dallas Public Library—a place to meditate during the convention this month.



A Dallas play place where dentists may disport themselves between sessions.

In the MAIL

Editor ORAL HYGIENE:

Your editorial in July *ORAL HYGIENE* entitled, "Our Holy Contemporaries" is so sensible and practical that I cannot refrain from sending on a word of commendation. As I have told you before, I feel that we all appreciate having our flowers in life and where they are honestly distributed, it seems to me we are all made happier.

You state that the book publishers and schools are "eleemosynary" but I really believe that they have fallen into a state of "innocuous desuetude." This also is contained in the big dictionaries.

One cannot but admire a man in an editorial capacity who has the courage of his convictions, so I say: more power to your elbow. With kindest regards and best wishes, I am,

Sincerely yours,
ERNEST GAGE SKIFF, D. D. S.

West Palm Beach, Fla.

Editor ORAL HYGIENE:

It is a truism that backward India sorely needs a forward pulling hand from those in the vanguard of the world's civilization.

I shall therefore feel grateful if you will very kindly place this Hindu institution on your complimentary list to receive each month a copy of *ORAL HYGIENE*.

Thanking you prospectively for your courtesy and favor,
Yours from far-off India.

THE SANNYASI ASHRAM,
Superintendent.

Sargodha, India.

Editor ORAL HYGIENE:

Some visiting confrère, of whom I receive a few every season, has forgotten on my table a copy of *ORAL HYGIENE*.

I am beginning to think it was a reprehensible act committed with malice aforethought, for I have caught the fever after reading its sprightly pages and I want some more.

I can find no editorial page where it says so much per annum, or if you take cordwood or skins in exchange, so I just ask you to send it along regularly and tell me how much I owe.

Yours from far off India,
CHAS. W. COWAN, D. D. S.

Nice, France.

International Oral Hygiene

Translated and Briefed by C. W. BARTON,
Fort Wayne, Indiana

Canada

The Royal College of Dental Surgeons in Toronto has organized a special clinic at the College building, for the purpose of giving free dental treatment to the children of the poor. A recent survey of the Separate Schools in the central area of that city shows that of 2,272 pupils examined, 1,577, or 70 per cent, were found with dental disease. The new service is for children of both Public and Separate Schools, and will assist the regular school dentists to cope with the prevalence of dental disease in the downtown sections. (*Oral Health*, April 1924).

The Canadian Dental Hygiene Council (see ORAL HYGIENE, Sept., 1924) is not a dentists' organization. During numerous conferences between professional and lay organizations, all aiming at the same goal by devious routes, it was decided that the ideal organization for public oral hygiene education was not the dental profession itself, nor any group of dentists, but an association in which laymen would take a prominent part. Dentists are members of the Council, but the organization is primarily a laymen's association. (*ibid.*, June, 1924.)

The school dental clinic of Quebec has given treatment to 1,915 children, from September, 1922 to December, 1923; the extractions lead with 5,373, against 572 prophylactic treatments, and 450 fillings. It is expected to bring the number of examinations to from three to four thousand per annum. (*Revue Dentaire Canadienne*, May, 1924.)

Brazil

The dental service in the Brazilian Army is to be reorganized, with a view to giving more systematic attention to the men's teeth, the state of which determines their fitness. (*Boletim Odontologico*, No. 41, 1924.)

A *League of Oral Hygiene* has been founded in Brazil under the leadership of Drs. Coelho e Souza, Frederico Eyer, and Garçao Ribeiro. It is hoped that this league will instill the proper ideas about the importance of oral health in the Educational and Health Departments of the government. (*ibid.* No. 42, 1924.)

Uruguay

In *Progresos Odontológicos* are being reprinted several popular articles, written by F. M. Pucci for the daily "*El Día*" of Montevideo, in the laudable endeavor to acquaint the public with the importance of oral health. The first essay sums up the meaning of oral hygiene; ocular disturbances of dental origin; cancer and oral infections; dental caries in children; the temporary teeth from an aesthetic viewpoint, are titles of subsequent articles. They are also being translated into Portuguese and, on the initiative of Alves d'Almeida, will be published in the Brazilian section of "*La Razón*".

Pucci has presented, in 1921 and 1922, a remarkably well written memorial on Dental Hygiene and Dental Service in the Schools of Uruguay, taking as a model for a

future organization the Forsyth Dental Infirmary. In spite of the approval and understanding shown this scheme by the authorities, the financial straits the country is in make it impossible to put it into operation.

Great Britain

F. St. J. Steadman, in a very noteworthy essay full of clinical evidence, comes to the conclusion that oral sepsis is one of the commonest, and probably the commonest, predisposing causes of cancer of the alimentary canal and its associated parts. The evidence is, among others, this: that in the tongue we are able to watch the actual development of cancer in all its stages through chronic irritation from a sharp and carious tooth; 86 per cent of all extra-sexual cancer occurs in the alimentary tract; long-standing chronic inflammation is known to predispose to development of cancer; the great majority of persons suffering from cancer in the alimentary canal have advanced pyorrhea which has been present for many years; this advanced periodontal (?) disease is not nearly so common in persons not suffering from cancer; there is evidence in favor of the conclusion that the constant swallowing of pus can and does in many cases bring about a chronic gastritis, and that the majority of persons suffering from cancer of the stomach have had chronic gastritis for many years prior to the development of the disease. (*The Dental Journal*, April, 1924).

The Dental Board of the United Kingdom have adopted the following recommendations of their propaganda committee: that the Board of Education be invited to receive a deputation from the Dental Board with reference to the institution of suitable instruction in oral hygiene in primary and secondary schools; that the Dental Board insist on the need of extending the present provision of dental treatment under the National Insurance Acts; that an initial expenditure of £50 be made

for the purchase of suitable films. The estimated yearly income of the Dental Board is £45,000. (*ibid.*, June, 1924.)

France

In the well-known factories of Michelin, in Clermont-Ferrand, a dental service has been organized for the workmen and employes, on the conviction that the efficiency of all will increase under competent dental treatment. (*Dental*, No. 6, 1924.)

The society for the propagation of hygiene, founded in 1920 under the name "l'Hygiène par l'Exemple", has been doing excellent work in several provinces of France. The society, as its name denotes, does not believe in theoretical propaganda, but in the didactic power of the practical example. The society holds the view that all hygienic work must begin in the schools, since the older generation are sure to scoff at anything "new-fangled". Children may be made to acquire "the habit of having good habits", and in fact will teach their parents rather than be taught by them.

The municipality of Dijon has increased the appropriation for dental service in the schools from 1,400 to 15,000 Francs. Besides a monthly examination by the medical inspector, the health service provides a thorough dental inspection of every child twice a year. The poor children are treated gratuitously, the others have free choice of their dentist. (*La Presse Dentaire*, June, 1924.)

L. -A. Chambrillon insists that, just as all the efforts of the dentist are in vain without daily and systematic oral hygiene practiced by the patient, there is no oral hygiene without an adequate "tooth-brush drill" as originated and taught in the U. S. A. The best way to ensure systematic cleanliness of the mouth is by adhering strictly to Pierre Robin's *catechism* which makes the patient count each stroke of the brush for each tooth. Chambrillon also rejects theoretical propaganda and direct education of the

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parents as proper means to the end, the instruction of the child remaining the one and only hope of the dental hygienist. (*La Semaine Dentaire*, No. 14, 1924.)

E. Benoist recommends to his confrères most heartily the imitation of the American system of periodical convocation by the dentist of patients who desire to save their teeth by preventive treatment rather than operative measures. Not only is prevention better than cure, but much trouble and excitement is spared both the patient and the dentist. (*ibid.*, No. 17.)

In the first part, entitled *The Evil*, of a symposium on *Oral Hygiene from a social point of view*, L. -A. Chambrillon recites his experiences during a dental examination of soldiers: of 700 men examined, only 10 had perfect teeth. Statistics of the French Army show that the total of 400,000 men costs 18,637 days in hospital as a result of diseased teeth. He calculates that the 21 millions producing inhabitants of France are losing annually 976,500 working days, which cost the Nation hundreds of millions of Francs. These are the direct losses through dental disease. More appalling still are the losses experienced through the mediary dangers of bad teeth (tuberculosis, chronic and acute bronchitis, pneumonia, grippe, etc.) Results from this, therefore, the immense economic and social significance of oral hygiene as a means of checking the depopulation of France, an undertaking which is very much more logical and promising of success than the attempt at re-population through stimulation of the birth-rate. (*ibid.*, No. 25, 1924.)

Belgium

The Minneapolis dental week, as reported in *ORAL HYGIENE*, is reviewed in *Revue Belge de Stomatologie*, of June, 1924. The brief résumé is exact enough. Here is the less intelligent critique contained in the closing paragraph, translated in extenso: "The report does not tell

us whether this 'week' bore its fruit and whether the dental offices of the city experienced its happy results, but it is permitted to ask oneself where the originality, inventive and a little....commercial, of the American dentists will stop."

Denmark

The first school dental clinic in Copenhagen, opened in January, 1923, has effected 34,947 treatments on 9,439 children. A new clinic is going to be built shortly at a cost of 90,000 kroner. Copenhagen will then possess the best school dental clinic in Europe capable of systematic examination and treatment of the 30,000 school children of the city. (*Tandlaegebladet*, May, 1924.)

Norway

Svein Tengedal, after his admittedly short experiences as school dentists comes to the conclusion that of all the measures possible in a school dental service the daily tooth-brush drill is the most possible and the most successful. He makes no mention of the experiences American hygienists have had with this drill.

The inspector of the public schools of Trondheim reports that in the year 1922-23 only 6,503 pupils out of a total of 7,372 have been examined on account of lack of personnel, etc. Of these 6,503 children, 6,188 were treated, viz. 98.82 per cent, at a cost of 49,775 kroner, of which the State contributed 12,275, the community 37,500 kroner. (*Den Norske Tandlaegeforenings Tidende*, April, 1924.)

Switzerland

In order to ensure systematic and more thorough dental examination and treatment of the school children in Zurich, it has been decided to request the competent authorities to enlarge the school dental clinics. (*Dental*, No. 3, 1924.)

Laffodontia

If you have a story that appeals to you as funny, send it in to the editor. He *may* print it—but he won't send it back.

TEACHER: "Who can give me a sentence using the word fundamental?"

KEY: "My sister vent out horsebeck riding and vhen she come home for lunch she had to eat fundamental."

A violinist entered a little music shop in London. "I want an E string," he remarked to the new clerk behind the counter.

Producing a box, the latter said, "Would you mind picking one hout for yourself, sir? I 'ardly know the 'es from the shes."

HE: "Pardon me. May I have this dance?"

SHE: "No. I'm too danced out."

HE: "You're not too damn stout. You're just pleasingly plump."

"Picture me," he cried, "in your arms!!"

And then she framed him.

EDITH: "Dicky dear, your office is in State Street, isn't it?"

DICKY: "Yes, why?"

EDITH: "That's what I told Papa. He said he'd been looking you up in Bradstreet."

SADIE (Age 6): "Lemme chew yer gum fer awhile willya, Jim?"

JIMMIE (Age 7): "Gold digger!"

TEACHER: "Do you know what the gulf stream is?"

HERMAN: "Sure! It's a river dot runs by a gulf club."

"Why so depressed, Brown?"

"The horrible cost of living, old chap: constant bills for materials, paint and shingling."

"What—for your house?"

"No. My daughters."

"Did you enjoy the bachelor dinner last night, dear?"

"Oh, yes; rather slow affair though!"

"And who were the bachelors named Alma and Kittie who wrote their names on your shirt bosom?"

MR. BANNIE: "Miss Alice, if I should kiss you would you call for your father?"

MISS ALICE: "Yes, but he's not at home."

As Clarence prepared to leave the house on Sunday evening his father inquired:

"Where are you going tonight?"

"I am on my way to worship," Clarence replied.

"I know that," said father, "but what's her name?"

MAE: "So Freddie is teaching you baseball?"

RAE: "Yes, and when I asked him what a squeeze play was, I think he put one over on me."

JEN: "Jack was held up last night by two men."

HEN: "Where?"

JEN: "All the way home."